WHAT IS CLAIMED IS:

1. An image processing apparatus, comprising:

edge detecting means for determining the presence/absence of an edge at each pixel of input image

5   data;

selecting means for selecting a weighting matrix corresponding to the position of the edge of each target pixel determined to have an edge by said edge detecting means;

10   calculating means for calculating data of the target pixel and the pixels surrounding the target pixel using the weighting matrix selected by said selecting means;

enhancement range determining means for

15   determining the range of edge enhancement of the target pixel by comparing the calculation result of said calculating means to a specific threshold value; and

edge enhancing means for executing an edge enhancement process on data of object pixels within the

20   enhancement range determined by said enhancement range determining means.

2. An image processing apparatus according to claim 1, wherein

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said enhancement range determining means increases the weighting of components corresponding to the interior side of the edge in the weighting matrix.

3. An image processing apparatus according to claim 1, wherein

said edge detecting means determines the edge to be between pixels.

4. An image processing apparatus according to claim 1, wherein

said enhancement range determining means selects the weighting matrix based on the presence/absence of an edge in four directions surrounding the target pixel.

5. An image processing apparatus according to claim 1, wherein

said edge enhancing means executes processing based on the hue and chroma of the pixels surrounding the object pixel.

6. An image processing apparatus according to claim 1, wherein

said edge enhancing means executes processing based on the distance of the object pixel to the target pixel.

7. An image processing method, comprising the steps of:

determining the presence/absence of an edge at each pixel of input image data;

selecting a weighting matrix corresponding to the position of the edge for each target pixel determined to have an edge;

calculating data of the target pixel and pixels surrounding the target pixel using selected weighting matrix;

comparing the calculation result to a specific threshold value;

determining the range of edge enhancement for the target pixel based on the comparison result; and

executing an edge enhancement process for the object pixels within the determined enhancement range.

8. An image processing method according to claim 7, wherein

the weighting of components corresponding to the interior side of the edge in the weighting matrix is increased in the step of determining the range.

9. A medium readable by a computer storing computer-executable programs comprising the steps of:

determining the presence/absence of an edge at each pixel of input image data;

selecting a weighting matrix corresponding to the position of the edge for each target pixel determined to have an edge;

calculating data of the target pixel and pixels surrounding the target pixel using selected weighting matrix;

comparing the calculation result to a specific threshold value;

determining the range of edge enhancement for the target pixel based on the comparison result; and

executing an edge enhancement process for the object pixels within the determined enhancement range.

10. An image processing apparatus, comprising:

edge detecting means for determining the presence/absence of an edge at each pixel of input image data;

calculating means for calculating data of the target pixel determined to have an edge by said edge detecting means and the pixels surrounding the target pixel using the weighting matrix;

enhancement range determining means for determining the range of edge enhancement of the target pixel by comparing the calculation result of said calculating means to a specific threshold value; and

edge enhancing means for executing an edge enhancement process on data of object pixels within the enhancement range determined by said enhancement range determining means.